EXHIBIT Y

EXHIBIT 3

REDACTED VERSION
BROWN DECLARATION IN SUPPORT
OF DEFENDANTS' MOTION TO
EXCLUDE

CONFIDENTIAL

Page 857

 1   UNITED STATES DISTRICT COURT

 2   NORTHERN DISTRICT OF CALIFORNIA, SAN JOSE DIVISION

 3

 4   IN RE: HIGH-TECH EMPLOYEE   No. 11-CV-2509-LHK

 5   ANTITRUST LITIGATION

 6   _____

 7

 8   CONFIDENTIAL PORTIONS DESIGNATED

 9

10   Continued Videotaped Deposition of EDWARD E.

11   LEAMER, PH.D., Volume 3, taken at the offices

12   of O'Melvey & Myers LLP, Two Embarcadero Center,

13   Suite 2800, San Francisco, California commencing

14   at 9:03 a.m., on Monday, November 18, 2013,

15   before Leslie Rockwood, RPR, CSR No. 3462.

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24   JOB No. 1765129

25   PAGES 857 - 1169

CONFIDENTIAL

Page 872

1   Q.   In fact, you relied on the Complaint in this

2   case for your report?

3   A.   Yes, I did.

4   MR. RILEY: Let's have this marked as

5   Exhibit 105.   09:11:09

6   (Exhibit 105, color diagram, marked for

7   identification.)

8   Q.   BY MR. RILEY: Exhibit 105 is a diagram that is

9   taken from the Consolidated Amended Complaint, paragraph

10   108.   09:11:37

11   Now reviewing this diagram, Dr. Leamer, is there

12   any evidence at all that Adobe did not compete during the

13   conduct period with Intuit, Google, Intel, Pixar, and

14   Lucasfilm?

15   A.   Well, I'm not sure this document is -- speaks to   09:11:58

16   the question that you made a reference to.   This document

17   speaks to the illegal agreements.   It doesn't say

18   anything about the extent to which one firm competes with

19   the other, the extent that Adobe might be hiring from

20   Intel or Intuit, for example.   That simply is not   09:12:16

21   relevant.

22   Q.   Right.   The fact of competition is not relevant?

23   A.   This document is a description of the illegal

24   agreements, and it says nothing about whether Adobe,

25   absent or with the agreements, was competing for   09:12:30

CONFIDENTIAL

Page 873

1   employees directly with Intel or Intuit. It merely is an

2   image that describes the agreements. It doesn't describe

3   competition, and you're asking me to interpret it as if

4   it described competition, but it was never intended to do

5   that.   09:12:47

6   Q. I'm just directing your attention to Adobe as

7   shown on this chart. Are you aware of any evidence that

8   during the conduct period -- or let me rephrase that.

9   Are you aware of any evidence before, during, or

10   after the conduct period that Adobe did not compete with   09:12:59

11   Intuit for employees?

12   A. As I sit here today, I'm not aware of any

13   specific evidence that would indicate that. There is

14   a -- there are payroll records, of course, which we have,

15   and we can tell who Adobe hired from in the periods in   09:13:20

16   which the agreements were in place. So it would be

17   fairly easy to determine which of these defendants, if

18   any, Adobe hired from.

19   Q. Did you do that work --

20   A. But in terms of who they compete with, that's a   09:13:32

21   rather broad and ambiguous question. And the mere fact

22   that they didn't hire from Intuit doesn't mean that they

23   were or were not competing in the same market frame with

24   Intuit.

25   Q. Are you aware of any evidence in this case that   09:13:46

CONFIDENTIAL

Page 874

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 1   before, during, or after the conduct period Adobe was not

 2   competing with Google for employees?

 3        A.   Well, are you asking me whether they compete --

 4   whether they're hiring directly or whether they're hiring

 5   in the same market that the Google employees happen to be      09:14:05

 6   in?  So are you asking me whether they are cold-calling

 7   or directly approaching Google employees, or the more

 8   general question, are they hiring, say, software

 9   engineers, all of whom are hired by all of these

10   companies?                                                     09:14:24

11        Q.   I'm using the word "competing" in the same way

12   that you used it in paragraph 82 of your report.  You

13   said, "Documents reveal that the defendants would

14   otherwise have been competing for employees."

15        Do you see that?                                          09:14:35

16        A.   I do see that.

17        Q.   Okay.  So my question is:  Do you have -- are

18   you aware of any evidence that during -- that before,

19   during, or after the conduct period, that Adobe was not

20   competing with Google for employees?                          09:14:48

21        A.   Well, I think the better way of saying it is

22   that a channel between Adobe and Google has been closed

23   down by the illegal agreements, and it's through that

24   channel that Adobe historically would have been competing

25   for the employees at Google.                                  09:15:16
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CONFIDENTIAL

Page 875

1   Q.   On Exhibit 105, can you direct my attention to

2   the channel between Adobe and Google that has been shut

3   down?

4   A.   Adobe had an agreement with Apple, and Apple had

5   an agreement with Google.   09:15:26

6   Q.   But Adobe is free to compete directly for Google

7   employees; correct?

8   A.   But again, you're having a rather limited notion

9   of how a market operates, and I'm thinking that the

10   competition for these workers between Adobe and Google is   09:15:43

11   attenuated as a consequence of this chain of illegal

12   agreements.

13   Q.   Adobe is free to -- under this arrangement shown

14   in Exhibit 105, Adobe is free to cold-call, recruit, and

15   hire employees from Google; correct?   09:16:01

16   A.   That's correct.

17   Q.   And Adobe is also free to cold-call, hire, and

18   recruit employees from Intel; correct?

19   A.   That's correct.

20   Q.   And Adobe is free to cold-call, hire, and   09:16:14

21   recruit employees from Pixar under this arrangement?

22   A.   That's correct.

23   Q.   And Adobe is free to cold-call, recruit, and

24   hire employees in Lucasfilm under this agreement?

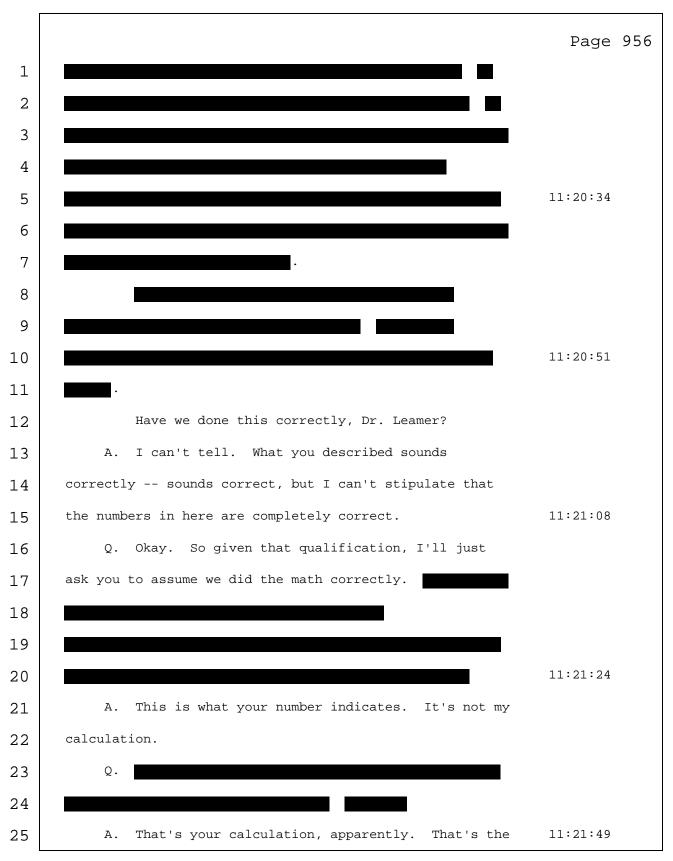25   A.   That's correct.   09:16:27

CONFIDENTIAL

Page 876

1   Q.   So the only company that Adobe is restricted

2   from hiring -- from cold-calling from is Apple; correct?

3   A.   That's correct.

4   Q.   Now, in fact, during the conduct period, the

5   defendants who had cold-call agreements continued to   09:16:46

6   compete with employees in other ways; correct?

7   A.   They had other channels, recruiting channels, in

8   operation that were allowed by the agreements. I have

9   not studied the extent to which that recruiting was

10 actually occurring.   09:17:02

11   Q.   Why didn't you study that?

12   A.   Because I was studying the impact of the

13 cold-calling agreements.

14   Q.   Wouldn't that be relevant to impact to

15 understand what channels were otherwise available?   09:17:13

16   A.   Well, you really want to know whether those

17 channels were in some ways substitute for the

18 cold-calling that was prevented, and the data sets did

19 not allow me to do that.

20   The recruiting data is very weak, and I continue   09:17:26

21 to argue, as you've heard in the past, that the

22 cold-calling is a special channel that approaches special

23 employees providing special information that isn't

24 provided by the other methods of recruiting.

25   Q.   What special information is available through   09:17:42

CONFIDENTIAL

Page 952

1   older employees?

2   A.   Well, the calculated damages will have that

3   feature.   That's for sure.

4   Q.   Okay.

5   A.   But I want to make a couple of comments, which   11:13:38

6   is that this age variable doesn't have a big impact on

7   the firm total damages.   And secondly, the -- the --

8   the -- this talks about percentage impact, not absent

9   impact.   So the percentage of the younger workers are off

10   a lower base.   So you'd better take a look at the absent   11:14:02

11   impact, not just the percentage.

12   And then finally, the idea that is the 25,

13   30-years-olds who are going to be the -- where the

14   cold-calling is concentrated, that seems sensible to me.

15   Q.   But in your model, the 20-year-old, who is   11:14:19

16   unlikely to get cold-calls, is -- has a proportionality

17   greater impact than the 28-year-old, who is likely to get

18   cold-calls?

19   A.   That's the attempt of the model which is a

20   quadratic form trying to fit something that may not have   11:14:38

21   that shape.

22   Q.   So how can this possibly make sense given your

23   opinion that younger employers are less likely to be

24   cold-called, but your model demonstrates that those

25   younger employees suffer a greater injury from not being   11:14:53

CONFIDENTIAL

Page 953

1   cold-called? How does that make sense, Dr. Leamer?

2   A. Well, I think that's a little distortion. My

3   goal was not to estimate the age profile of impact. I

4   was never asked to do that. I was meant -- I was asked

5   to estimate the total impact. And I recognize that age   11:15:11

6   might be a consideration, that the age distribution of

7   these firms as they vary over time and as they vary one

8   to another might have had an impact on the total damages.

9   And thus I attempted to deal with that by the age and age

10   squared, which are the normal variables that economists   11:15:30

11   use for describing the age distribution of wages and

12   presumably impact as well.

13   Q. But --

14   A. And then when I get this anomaly, which worries

15   me too, the fact that the youngest workers have the   11:15:44

16   largest impact, the question is, is that a material

17   consideration. It's not surprising to me that the --

18   that the -- that the 30-year-olds, who are still mobile,

19   they could easily be where the cold-calling has the

20   biggest impact, and you get to be 40-year-olds, maybe   11:16:04

21   you're more cemented and locationally committed. And so

22   it's seems reasonable.

23   I think it's inappropriate to think that the

24   very youngest workers are going to have the most impact

25   of the cold-call.   11:16:24

CONFIDENTIAL

Page 954

1   Q.   But that's what your model produces.

2   A.   Well, my model produces an estimate of the

3   damages. I didn't build a model that was intended to

4   disaggregate individual-by-individual. So this is an

5   attempt to control for the differences in the age   11:16:37

6   distributions across firms, and when you -- when you do

7   this, it doesn't have a big impact on the -- on the

8   damages.

9   Q.   But you continue to maintain and use the age

10 conduct variables in your calculation of damages;   11:16:52

11 correct?

12   A.   Well, this is the data -- most -- among the

13 functional forms that we estimated, this is the one that

14 the data likes the most. So if my job were to determine

15 the age profile of impact, I would have taken another   11:17:07

16 step. But in terms of controlling for the differences

17 among firms and the differences over time as firms hire

18 or as their workforce changes, this seems to me to be an

19 adequate calculation.

20   It's inappropriate if my task were to determine 11:17:25

21 the age profile of damages. It's completely appropriate

22 if my task is to correct for differences in age

23 composition of the workforces of these seven defendants.

24   Q.   But your result is inconsistent with your theory

25 about who is most likely to be cold-called. Doesn't that 11:17:45

CONFIDENTIAL

Page 955

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 1    give you pause?  Doesn't that give you concern?

 2            MR. GLACKIN:  Object to the form.

 3            THE WITNESS:  Well, again, I answered that,

 4    which is that -- that I was not asked to estimate the age

 5    profile of impact.  I was asked to compute total damages.    11:17:58

 6    And my goal was to control for the differences in these

 7    firms in terms of age composition.  And this is the way

 8    that I've carried that out.  Now and this turns out not

 9    to matter very much.

10        Q.  BY MR. RILEY:  Because it doesn't have much          11:18:17

11    impact on damages, it doesn't matter?

12        A.  That's correct.

13        Q.  I want to go through another example with you.

14            MR. RILEY:  Let's have this marked as the next.

15            (Exhibit 109 (Confidential), Names Plaintiff         11:19:29

16            Siddharth Hariharan Actual and But-For

17            Compensation and Alledged Damages, marked for

18            identification.)

19        Q.  BY MR. RILEY:  Dr. Leamer, in Exhibit 109 we are

20    looking at ████████████████████████████████                 11:19:39

21    ████████████████████████████████████████

22    ███████████████████████████████████

23    ██████████████████████████████████████

24            ██████████████████████████████████

25    ████████████████████████████████                            11:20:04
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CONFIDENTIAL

Page 956

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7　██████████████ .

8　　　　██████████████████

9　████████████████ ████████

10　████████████████████████　　11:20:51

11　████ .

12　　　　Have we done this correctly, Dr. Leamer?

13　　　A.　I can't tell. What you described sounds

14　correctly -- sounds correct, but I can't stipulate that

15　the numbers in here are completely correct.　　11:21:08

16　　　Q.　Okay. So given that qualification, I'll just

17　ask you to assume we did the math correctly.　█████

18　███████████████████

19　█████████████████████████

20　████████████████████████　　11:21:24

21　　　A.　This is what your number indicates. It's not my

22　calculation.

23　　　Q.　██████████████████████

24　█████████████ ████████

25　　　A.　That's your calculation, apparently. That's the　11:21:49

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CONFIDENTIAL

Page 957

1   number that I'm looking at here.

2   Q.   Right.   But based on this description, we're

3   following your model correctly; is that right?

4   MR. GLACKIN: Object to the form.

5   THE WITNESS: Well, you're misusing my model for   11:21:59

6   the reasons I already indicated.

7   Q.   BY MR. RILEY: How are we misusing it?

8   A.   Because I said before that my intent was not to

9   produce an estimate of damages person-by-person,

10   age-by-age.   I wanted to estimate the collective damages   11:22:13

11   for each firm in every year.

12   Q.   So your model cannot be correctly applied to

13   determine the alleged damages for any individual?

14   A.   That's correct.   I think that I would use it in

15   a different way.   I would certainly be aware -- if you're   11:22:23

16   asking me to create a wage profile, an age profile of

17   damages, I would certainly have done this exercise in a

18   somewhat different way.

19   Q.   How would you have done it if you were asked to

20   compute damages for individuals?   11:22:41

21   MR. GLACKIN: Object to the form.

22   THE WITNESS: Well, I would look at the

23   distribution exactly.   In fact, I did.   I looked at that

24   curve, and it bothered me that it had that shape because

25   it wasn't consistent with my understanding of the impacts   11:22:52

CONFIDENTIAL

Page 958

1   of the agreements. But the question isn't whether that's

2   the wrong shape. The question is whether is this

3   adequate to adjust for the different age compositions of

4   the different employers, and my view is yes.

5   I never intended this ever to be used in the way   11:23:11

6   that you're going down here.

7   Q. BY MR. RILEY: You never intended your model to

8   be used to compute damages for individual class members?

9   A. For individuals. It's for damages firm-by-year.

10   And the reason I use the individual data is because I   11:23:22

11   thought it was a more appropriate data source for

12   estimating firm-by-year damages, not because I wanted to

13   offer an expert opinion about each individual's damages.

14   Q. So let's take a look at the second page. And

15   what we've done here -- and I realize you believe this is   11:23:42

16   inappropriate to determine individual damages, ██████

17   ██

18   ██

19   ██████

20   ███████████████████████████████████   11:24:01

21   ██

22   ██

23   ██████████████

24   How does that make any sense?

25   MR. GLACKIN: Object to the form.   11:24:17

CONFIDENTIAL

Page 1034

1   which means those wild estimates could be much bigger or

2   much smaller.

3   Q. BY MR. RILEY: Right. But you would agree that

4   statistical significance is an important characteristic

5   of a reliable model?   13:55:51

6   MR. GLACKIN: Object to the form.

7   THE WITNESS: I'm not sure I would agree with

8   that. I think that you'd have to tell me what the

9   alternative model is and why this model that produced

10 less statistical significance might be a better model or 13:56:08

11 a worse model.

12   I don't know is the answer. I think it's a

13 common practice among economists to look for models that

14 have statistical significance, but as you know from my

15 report, I've argued that that is a mistaken notion when   13:56:23

16 it comes to the pursuit that I followed, which is trying

17 to find the best possible estimate. And if that happens

18 to have a large standard error and is still the best

19 estimate, you're going to have to live with what is

20 provided.   13:56:41

21   Q. BY MR. RILEY: So even though the model has --

22 lacks statistical significance on key variables, you have

23 to live with the result if that's all you have?

24   MR. GLACKIN: Object to the form.

25   THE WITNESS: Well, this is going to get us into   13:56:53

CONFIDENTIAL

Page 1035

1   a discussion of econometric methodology, but the data

2   don't speak by themselves in econometric exercises.

3   They're too weak and too colinear. So the practice of

4   analyzing data sets is a kind of interactive process

5   between the analyst and the data.   13:57:15

6   So the analyst is constantly making judgments as

7   to is this the wrong sign, is this too big, too small,

8   maybe we'd better get rid of that variable. And that

9   process which has no foundation in statistical theory

10 invalidates all the traditional notions of T values and   13:57:31

11 estimates, but it's still something that is commonly

12 practiced among economists because they feel like there

13 is such a sea of alternative models out there, they feel

14 compelled to try to search for one that is the -- is the

15 best way of characterizing the data and evidence. And   13:57:52

16 that's what I've done. Statistical significance plays

17 some role in that, but it's not the only thing.

18   Q. BY MR. RILEY: In fact, you have reported and

19 relied on statistical significance throughout this case

20 in your common factors analysis, for example?   13:58:02

21   A. Well, I have referred to statistical

22 significance. I'm not so sure I relied on that.

23   Q. You reported the statistical significance of the

24 variables that you used; correct?

25   A. I do that routinely. Regression analysis   13:58:17

CONFIDENTIAL

Page 1036

1   reports those things routinely. That would be a

2   requirement for a scientific study. You would absolutely

3   have to report that standard error.

4   The question that you raise, is there some

5   minimal level of standard error that means that that   13:58:29

6   variable shouldn't belong in there or that that model

7   isn't a good model. And I'm not so sure I agree with

8   what you said on that.

9   Q. You also reported the statistical significance

10   of the various compensation models you tested; correct?   13:58:43

11   A. Are you talking about regression?

12   Q. Yes.

13   A. The regression printout will always and always

14   should include the standard error of the coefficient so

15   it gives a sense of the range of possibilities. What   13:58:53

16   you're calling the statistical significance is really a

17   reference to T value or sometimes called a P value, or

18   alternative would be a P value. And that's another way

19   of characterizing how much uncertainty there is in that

20   particular coefficient.   13:59:09

21   So you need estimates and you need measures of

22   uncertainty. And you absolutely have to report those in

23   every regression that you estimate. And you're happier

24   when the statistical uncertainty is small.

25   Q. And the P values represent the probability that   13:59:21

CONFIDENTIAL

Page 1037

1   the result of a particular coefficient was simply random

2   error; correct?

3   A. Was simply random error. Meaning that if the

4   coefficient was zero, what is the chance of generating

5   this kind of outcome.   13:59:43

6   Q. Right. So setting the coefficient to zero is

7   the null hypothesis; correct?

8   A. That is a null hypothesis, and that is not the

9   appropriate null hypothesis in this case.

10   Q. What is the appropriate null hypothesis in this   13:59:58

11   case?

12   A. If you mean by null hypothesis zero damages,

13   that seems to me to have been decided upon by all the

14   textural and testimony and documents. And the question

15   isn't whether there's zero damages; the question is how   14:00:16

16   large they are.

17   So I would suggest that Google's decision to do

18   an across-the-board 10 percent increase in compensation

19   in their big bang, that's the natural null hypothesis.

20   The question is would these other firms but for   14:00:31

21   the agreements have adopted as aggressive a stance as

22   Google did in 2011. And so then instead of testing zero,

23   you could test the 10-percent level. And frankly, the

24   estimates that I have are compatible with 10 percent.

25   But rather than adopting a prejudice in favor of   14:00:51

CONFIDENTIAL

Page 1038

1   the larger number, the 10-percent number, or a prejudice

2   in favor of the smaller number, zero, I say let the data

3   speak. Let the data tell us the best estimate, and

4   that's what I provided.

5   Q. So let's go to your Exhibit Number 2 of your   14:01:07

6   October 28th report.

7   A. What page are we on here?

8   Q. That's at the very end of your report, and

9   there's no page number on it.

10   A. Oh, the -- okay.   14:01:29

11   Q. You have notes and you have three asterisks,

12   significant at 1-percent level, two asterisks,

13   significant at 5-percent level, one asterisk, significant

14   at the 10-percent level.

15   Do you see that?   14:01:43

16   A. I do see that.

17   Q. And that computation of statistical significance

18   was done setting the null hypothesis to zero?

19   A. That's correct.

20   Q. So when you were reporting statistical   14:01:53

21   significance, you didn't use this big bang theory. You

22   used what most statisticians would consider the

23   appropriate null hypothesis, which is zero for these

24   coefficients?

25   A. Well, most statisticians don't really think   14:02:09

CONFIDENTIAL

Page 1039

1   about what the appropriate null is. If you want to read

2   a good book, you should read Deirdre McCloskey's book

3   called "The Cult of Statistical Significance," arguing

4   how economists have misused this concept of statistical

5   significance.   14:02:22

6   This is just a printout from a regression. Just

7   a printout from regression. This is not a description of

8   my thought process.

9   MR. RILEY: Let me move to strike that.

10   Q. So when you were reporting statistical   14:02:31

11   significance in your notes in this document which you

12   prepared for use in this case for the Federal Court, you

13   used zero as the null hypothesis for these coefficients;

14   correct?

15   MR. GLACKIN: Object to the form.   14:02:51

16   THE WITNESS: Well, again, I hope you don't

17   think that was a choice. That's just a standard

18   operating procedure that economists use. When it comes

19   to estimating the damages, I'm trying to argue that that

20   is a poor idea.   14:03:05

21   Q. BY MR. RILEY: I'm asking what you actually used

22   in Exhibit 2.

23   A. Well, Exhibit 2 is just a printout of

24   regression, a standard printout of regression. It's just

25   a dump of regression data.   14:03:15

CONFIDENTIAL

Page 1040

1   The question is am I allowed to use wisdom in

2   interpreting all this stuff rather than just mechanical

3   reference to statistical significance.

4   Q.   When you reported statistical significance to

5   the U.S. District Court, you used zero as the null   14:03:29

6   hypothesis; correct?

7   MR. GLACKIN: Object to the form.

8   THE WITNESS: Just because that's the way that

9   it's usually done in econometric literature, but I

10   reserve the right to give an argument as to why that is   14:03:41

11   misleading in this case.   It can be appropriate when the

12   null hypothesis is the right null, when zero is the right

13   null.   But when the zero is not the right null, then the

14   statistical significance isn't material, and it

15   particularly isn't material when there's no presumption   14:03:59

16   of a zero impact.

17   Q.   BY MR. RILEY: In the estimates for the conduct

18   variable at four, which you represent is significant at

19   the 1-percent level.

20   Do you see that, Dr. Leamer?   14:04:17

21   A.   Yes.

22   Q.   And that determination of significance at the

23   1-percent level is calculated using the standard error

24   and the T value to compute a P value which gave you

25   significance at the 1-percent level; correct?   14:04:33

CONFIDENTIAL

Page 1041

1   A.   Correct, but you should realize that Exhibit 3

2   has the corrected standard errors per Dr. Murphy.

3   Q.   We're going to get to Exhibit 3. I'm just

4   focusing on Exhibit 2.

5   A.   So, anyways, I'm not relying on these numbers at   14:04:46

6   all. This is understating the uncertainty and

7   overstating the statistical significance, overestimating

8   the T values.

9   Q.   You said these numbers are understating the

10 certainty?   14:05:03

11   MR. GLACKIN: Understating the uncertainty.

12   MR. RILEY: I don't know what he said.

13   THE WITNESS: The standard errors are

14 underestimating. The T values are overestimated.

15   Q.   BY MR. RILEY: Why is that?   14:05:12

16   A.   Because of the internal correlation structure

17 among the many -- among the 277,000 workers in this data

18 set.

19   Q.   Right. So what that means is your observations,

20 the 277,119, are not strictly independent observations?   14:05:24

21   A.   Correct.

22   Q.   And because -- because of that, your computation

23 of the standard error is too high?

24   A.   No, the standard error is too low.

25   Q.   Too low?   14:05:43

CONFIDENTIAL

Page 1042

1   A.   The T stat is too high.

2   Q.   Right.   And that's because in the -- in the

3 standard error, the denominator relates to the square

4 root of the observations?

5   A.   More or less, that's what it is, yeah.   14:06:05

6 Effective number of the observations.

7   Q.   So you decided that in light of Professor

8 Murphy's criticism, you needed to correct these standard

9 error numbers; correct?

10   A.   Yeah, I thought he had a legitimate comment that   14:06:18

11 standard errors were underestimated.

12   Q.   And that's what you did in Exhibit 3; correct?

13   A.   Yeah, and this is his treatment for the problem,

14 which is what I did in Exhibit 3.

15   Q.   And Exhibit 3 shows robust standard errors;   14:06:32

16 correct?

17   A.   Does it say robust?

18   Q.   Look at Column 2 in the --

19   A.   Oh, yes.

20   Q.   -- exhibit that you prepared.   14:06:46

21   A.   Yes.

22   Q.   You have "robust."

23   A.   Correct.

24   Q.   And by "robust," you mean these are clustered

25 standard errors; right?   14:06:53

CONFIDENTIAL

Page 1043

1   A. Well, I mean the word "robust" should be used

2   to -- insensitive to changes in the model. But these are

3   meant to be asymptotically robust, meaning as you get an

4   infinite data set, these will work fine. But whether

5   they are robust in a finance sample is very much doubtful   14:07:13

6   in my mind.

7   Q. So you shouldn't have used the word "robust" if

8   you had doubt about this data set; right?

9   A. Again, I used the word "significant." In

10 everyday common language, the word "significant" means   14:07:25

11 important.

12   Q. I'm not asking about significant. I'm asking

13 about robust.

14   MR. GLACKIN: Let him finish his answer.

15   THE WITNESS: I'm burdened by the language that   14:07:34

16 economists have, and they overuse the word "significant,"

17 and they start to think that "significant" is the same as

18 important. It isn't. It's about measurability.

19   The same thing is true with this word "robust."

20 To use that to refer to these standard errors, that's not   14:07:49

21 my word here. I didn't make that word up. That's what

22 they're using for describing this procedure, and I just

23 adopted that language as a way of communicating what was

24 done.

25   But I'm expressing doubt about the   14:07:59

CONFIDENTIAL

Page 1044

1   appropriateness of the language in both cases. "Robust"

2   is misleading, and "significant" is misleading as well.

3   Q.   BY MR. RILEY: So under the column that says

4   "robust standard error," those values are the result of

5   clustering the standard errors?   14:08:12

6   A.   Correct.

7   Q.   And what this produces is two of the variables,

8   the conduct interacted with the new hires and the general

9   conduct variable are not statistically significant;

10   correct?   14:08:33

11   A.   That's correct.

12   Q.   And isn't it true that that conduct variable,

13   which is not statistically significant, is responsible

14   for the greatest share of the damages that you calculate

15   for the defendants?   14:08:48

16   A.   That coefficient minus .0559 is the critical

17   coefficient, that's correct.

18   Q.   Right. So now in your model, the critical

19   coefficient responsible for the greatest measure of

20   damages doesn't have statistical significance; right?   14:08:59

21   A.   It has a large standard error. Let's use that

22   word. And what a large standard error means is that the

23   estimate is 5.6 percent and the standard error is .04.

24   So that's -- that says that, in fact, the data are

25   compatible with a 9-percent impact or compatible with a 14:09:17

CONFIDENTIAL

Page 1045

1   1-percent impact. The best impact -- the best estimate

2   is the 5.6 percent. So it's symmetric with regard to up

3   and down. It's no -- it's no tendency for it to be

4   smaller. The standard error says it could be larger; it

5   could be smaller.   14:09:37

6   Q.   The null hypothesis for variable four would be

7   zero; correct?

8   A.   No, I said a sensible null hypothesis is .1.

9   That's the Intel. So rather than imagining that there

10   might be no impact of the conspiracy, let's use Intel's   14:09:52

11   choice in a post-conspiracy world of a 10 percent across

12   the board impact and see whether we can accept or reject

13   whether that coefficient is big as .1. And the answer is

14   you can't reject that.

15   So .1 is equally compatible with this data set   14:10:09

16   as is one -- as is zero. I'm sorry.

17   Q.   The notes in here compute significance based on

18   a null hypothesis is zero; correct?

19   A.   Well, I'm trying to argue why that is

20   inappropriate in this setting.   14:10:23

21   Q.   But the -- I want you to assume that that

22   approach which is reflected in the notes, the null

23   hypothesis for conduct is zero.

24   MR. GLACKIN: Object to the form.

25   Q.   BY MR. RILEY: I want you to assume that. What 14:10:36

CONFIDENTIAL

Page 1169

1   STATE OF CALIFORNIA   ) ss:

2   COUNTY OF MARIN   )

3

4   I, LESLIE ROCKWOOD, CSR NO. 3452, do hereby

5   certify:

6   That the foregoing deposition testimony was

7   taken before me at the time and place therein set forth

8   and at which time the witness was administered the oath;

9   That testimony of the witness and all objections

10 made by counsel at the time of the examination were

11 recorded stenographically by me, and were thereafter

12 transcribed under my direction and supervision, and that

13 the foregoing pages contain a full, true and accurate

14 record of all proceedings and testimony to the best of my

15 skill and ability.

16   I further certify that I am neither counsel for

17 any party to said action, nor am I related to any party

18 to said action, nor am I in any way interested in the

19 outcome thereof.

20   IN WITNESS WHEREOF, I have subscribed my name

21 this 20th day of November, 2013.

22

23

24   _____

25   LESLIE ROCKWOOD, RPR, CSR NO. 3462